

FILE 'CAPLUS' ENTERED AT 14:56:40 ON 23 JAN 2003  
L1        13451 S ALCOHOL AND (CONTAINER OR BOTTLE OR FLASK OR JUG OR JAR)  
L2        272 S L1 AND FUEL  
L3        3 S L2 AND CHARCOAL

L2 ANSWER 5 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:650138 CAPLUS  
 DN 137:172222  
 TI Manufacture of mixed fuel consisting of water and fossil  
     fuel, fish oil, plant oil, alcohols, etc.  
 IN Watanabe, Takao  
 PA Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
     CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C10L001-32  
     ICS C10L001-32  
 CC 51-24 (Fossil Fuels, Derivatives, and Related Products)  
     Section cross-reference(s): 52  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002241773	A2	20020828	JP 2001-77188	20010213
PRAI	JP 2001-77188		20010213		

AB The fuel is manufd. by gradual addn. of 30-80 wt.% liq. fossil  
     fuel (e.g. gasoline, gas oil, kerosene, heavy oil), pulverized  
     coal, fish oil, plant oil, alcs., etc. to a mixt. of 20-70 wt.%  
     water and 1-5 wt.% additives, under agitation. Prepn. of the fuel  
     by chem. and oxidative ultra-atomization of the mixts. by the implosion  
     power of Brown gas is also claimed. Containers for carrying out  
     the process is also claimed. Waste oil may also be used in the process  
     without any pretreatment.  
 ST water oil mixt fuel manuf; fossil fuel water mixt  
     implosive mixing; Brown gas implosion water oil mixed fuel  
     manuf; fish oil water mixing fuel manuf; plant oil water mixing  
     fuel manuf; pulverized coal water mixing fuel manuf;  
     alc water mixing fuel manuf  
 IT Fats and Glyceridic oils, uses  
     RL: PEP (Physical, engineering or chemical process); PYP (Physical  
     process); TEM (Technical or engineered material use); PROC (Process); USES  
     (Uses)  
         (fish; manuf. of liq. fuels by mixing of water and fossil  
         fuel, fish oil, plant oil and alcs., by implosion  
         force of Brown gas)  
 IT Petroleum, uses  
     RL: PEP (Physical, engineering or chemical process); PYP (Physical  
     process); TEM (Technical or engineered material use); PROC (Process); USES  
     (Uses)  
         (heavy; manuf. of liq. fuels by mixing of water and fossil  
         fuel, fish oil, plant oil and alcs., by implosion  
         force of Brown gas)  
 IT Explosion  
     (implosion, mixing by; manuf. of liq. fuels by mixing of  
     water and fossil fuel, fish oil, plant oil and alcs.  
     ., by implosion force of Brown gas)  
 IT Fuels  
     (liq.; manuf. of liq. fuels by mixing of water and fossil  
     fuel, fish oil, plant oil and alcs., by implosion  
     force of Brown gas)  
 IT Gas oils  
     Mixing  
     Waters  
         (manuf. of liq. fuels by mixing of water and fossil  
         fuel, fish oil, plant oil and alcs., by implosion  
         force of Brown gas)

IT   **Alcohols, uses**  
Gasoline  
Kerosene  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
      (manuf. of liq. fuels by mixing of water and fossil fuel, fish oil, plant oil and alcs., by implosion force of Brown gas)  
IT   **Wastes**  
      (oil; manuf. of liq. fuels by mixing of water and fossil fuel, fish oil, plant oil and alcs., by implosion force of Brown gas)  
IT   **Coal, uses**  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
      (powd.; manuf. of liq. fuels by mixing of water and fossil fuel, fish oil, plant oil and alcs., by implosion force of Brown gas)  
IT   **Fats and Glyceridic oils, uses**  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
      (vegetable; manuf. of liq. fuels by mixing of water and fossil fuel, fish oil, plant oil and alcs., by implosion force of Brown gas)

L2   ANSWER 6 OF 272 CAPLUS COPYRIGHT 2003 ACS  
AN   2002:650067 CAPLUS  
DN   137:170746  
TI   Part comprising polyolefin and ethylene-vinyl alcohol copolymer for fuel handling  
IN   Matsuoka, Hideo; Hamaguchi, Mitsushige; Kobayashi, Kazuhiko  
PA   Toray Industries, Inc., Japan  
SO   Jpn. Kokai Tokkyo Koho, 10 pp.  
      CODEN: JKXXAF  
DT   Patent  
LA   Japanese  
IC   ICM C08L023-00  
      ICS B60K015-01; C08J005-00; C08K003-00; C08L023-26; C08L029-04;  
         F16L011-04  
CC   38-3 (Plastics Fabrication and Uses)  
      Section cross-reference(s): 51  
FAN.CNT 1  
      PATENT NO.    KIND   DATE                   APPLICATION NO.   DATE  
      -----    ----  -----                   -----    -----  
PI   JP 2002241546   A2   20020828           JP 2001-45923   20010222  
PRAI JP 2001-45923                           20010222  
AB   The part, useful for fuel container itself or part surrounding the container, consists of 55-80 vol.% of a polyolefin as dispersed phases and 20-45 vol.% ethylene (I)-vinyl alc. (II) copolymer (III) as a matrix phase obsd. by electron microscope. Alternatively, the part contains 15-85 vol.% of a polyolefin and 15-85 vol.% III wherein both of them make matrix phases. The part is (a) that preferably manufd. by injection molding, injection compression molding, and/or compression molding, (b) a multilayer tube manufd. by coextrusion, or (c) a multilayer hollow molding prep'd. by blow molding. The part shows enhancement of gas and liq. permeation resistance, due to the specified polymer morphol., without affecting rigidity of polyolefins. Thus, HDPE 50, I-methacrylic acid copolymer (Nucrel AN 4214C) 10, and 32:68 (mol) I-II copolymer 40 parts were mixed, melt-kneaded, pelletized,

and injection-molded to give a test piece, which was soaked in 90:10 mixt. of gasoline and EtOH and left at 40.degree. for 24 h to show 0.8% absorption of the liq. mixt.

ST polyolefin blend part **fuel** handling part; morphol polyolefin blend **fuel** permeation resistance; gas liq permeation resistance **fuel** container; HDPE ethylene vinyl alc copolymer blend; gasoline ethanol mixt absorption permeability polymer

IT Molding of plastics and rubbers  
(blow; **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Molding of plastics and rubbers  
(compression; **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Fuels  
(containers; **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Glass fibers, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(fillers; in **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Extrusion of plastics and rubbers  
Impact-resistant materials  
(**fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Gasoline  
RL: MSC (Miscellaneous)  
(**fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Polyolefins  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(**fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Polymer blends  
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(**fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Containers  
(fuel; **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Polyamides, uses  
RL: MOA (Modifier or additive use); USES (Uses)  
(in **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT Molding of plastics and rubbers  
(injection; **fuel** container part contg. polyolefin and ethylene-vinyl alc. copolymer with specified polymer morphol.)

IT 25053-53-6, Nucrel AN 4214C

RL: MOA (Modifier or additive use); USES (Uses)  
     (compatibilizer; fuel container part contg.  
     polyolefin and ethylene-vinyl alc. copolymer with specified  
     polymer morphol.)  
 IT 9002-88-4, Polyethylene 25067-34-9, Ethylene-vinyl alcohol  
     copolymer 25213-02-9, Ethylene-1-hexene copolymer  
 RL: PEP (Physical, engineering or chemical process); POF (Polymer in  
     formulation); PYP (Physical process); TEM (Technical or engineered  
     material use); PROC (Process); USES (Uses)  
     (fuel container part contg. polyolefin and  
     ethylene-vinyl alc. copolymer with specified polymer  
     morphol.)  
 IT 25038-54-4, Nylon 6, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (in fuel container part contg. polyolefin and  
     ethylene-vinyl alc. copolymer with specified polymer  
     morphol.)  
 L2 ANSWER 10 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 2002:313094 CAPLUS  
 DN 136:327939  
 TI Production of liquefied hydrocarbon fuels having low pollutants  
 IN Hamada, Takaro  
 PA Japan  
 SO Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C10L001-02  
     ICS C10L001-08; C10L001-18  
 CC 51-9 (Fossil Fuels, Derivatives, and Related Products)  
 FAN.CNT 1
 

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002121572	A2	20020426	JP 2000-318413	20001018
PRAI	JP 2000-318413		20001018		

 AB The title fuels are produced by mixing 85-97 wt.% of di-Me ether  
     with 3-15 wt.% of an evapn. inhibitor contg. aliph. alc. (esp.,  
     iso-BuOH, tert-BuOH, iso-PrOH, isopentyl alc., and/or ethylene  
     glycol monoethyl ether), cooling and pressurizing the mixt. at 5-7 atm at  
     a temp. below -24.7.degree. to obtain liquefied products in sealed  
     container. The di-Me ether is preferably obtained by dehydration  
     of liquefied natural gas contg. mainly CH4.  
 ST liquefied hydrocarbon fuel dimethyl ether low pollutant  
 IT Natural gas, uses  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
     engineered material use); PROC (Process); USES (Uses)  
     (liquefied, dehydration of; in prodn. of liquefied hydrocarbon  
     fuels having low pollutants)  
 IT Fuels  
     (prodn. of liquefied hydrocarbon fuels having low pollutants)  
 IT 115-10-6, Dimethyl ether  
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or  
     engineered material use); PROC (Process); USES (Uses)  
     (blends with evapn. inhibitor; prodn. of liquefied hydrocarbon  
     fuels having low pollutants)  
 IT 67-63-0, Isopropyl alcohol, uses 75-65-0, tert-Butyl  
     alcohol, uses 78-83-1, Isobutyl alcohol, uses  
     110-80-5, Ethylene glycol monoethyl ether 112-34-5, Diethylene glycol  
     monobutyl ether 112-50-5, Triethylene glycol monoethyl ether 123-51-3,  
     Isopentyl alcohol  
 RL: MOA (Modifier or additive use); USES (Uses)

(evapn. inhibitor as; prodn. of liquefied hydrocarbon fuels  
having low pollutants)

L2 ANSWER 39 OF 272 CAPLUS COPYRIGHT 2003 ACS  
AN 2000:356895 CAPLUS  
DN 132:350248  
TI Packaged solid fuels for rapid cooking  
IN Morita, Chirio; Ito, Kenichi  
PA Niitaka Kagaku Kogyo K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C10L007-04  
CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)  
Section cross-reference(s): 17

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000144161	A2	20000526	JP 1999-211478	19990727
PRAI	JP 1998-246616	A	19980901		

AB The articles comprise chopped solid fuels contg. alcs  
. , resin films or sheets for wrapping the fuels, and a packaging  
container consisting of a fire-resistant material, e.g., metal  
foils, where the fire-resistant material has wavy or zigzag shape to give  
ridges for contacting to the films or sheets to show large air contact  
surfaces.

ST solid fuel rapid cooling packaging

IT Cooking

Packaging materials

(packaged solid fuels having large air contact surfaces for  
rapid cooking)

IT Alcohols, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
(packaged solid fuels having large air contact surfaces for  
rapid cooking)

IT Fuels

(solid; packaged solid fuels having large air contact  
surfaces for rapid cooking)

IT 9003-07-0, Polypropylene

RL: NUU (Other use, unclassified); USES (Uses)  
(films; packaged solid fuels having large air contact  
surfaces for rapid cooking)

IT 7429-90-5, Aluminum, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(foils; packaged solid fuels having large air contact  
surfaces for rapid cooking)

L2 ANSWER 56 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1999:21526 CAPLUS

DN 130:83885

TI Emergency alternative fuel for gasoline engines containing  
petroleum spirits and mixed primary C5-alcohols

IN Spencer, Reginald N.; Hubbard, William A.

PA Bloom & Kreten, USA

SO U.S., 17 pp., Cont.-in-part of U.S. 5,681,358.

CODEN: USXXAM

DT Patent

LA English

IC ICM C10L001-18

NCL 044300000

CC 51-7 (Fossil Fuels, Derivatives, and Related Products)

## FAN.CNT 6

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5853433	A	19981229	US 1997-956222	19971022
	US 5681358	A	19971028	US 1996-604080	19960220
	AU 9728069	A1	19981113	AU 1997-28069	19970421
	AU 732905	B2	20010503		
	BR 9714673	A	20000627	BR 1997-14673	19970421
	EP 1012216	A1	20000628	EP 1997-922386	19970421
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
	JP 2002501559	T2	20020115	JP 1998-545645	19970421
	US 5938799	A	19990817	US 1998-82407	19980520
	WO 9920714	A1	19990429	WO 1998-US22075	19981020
	W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HR, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	AU 9911021	A1	19990510	AU 1999-11021	19981020
	US 6110237	A	20000829	US 1999-296057	19990421
	US 6113660	A	20000905	US 1999-363504	19990729
PRAI	US 1995-536366	B2	19950929		
	US 1996-604080	A2	19960220		
	WO 1997-US6723	A	19970421		
	US 1997-956222	A2	19971022		
	US 1998-82407	A2	19980520		
	WO 1998-US22075	W	19981020		
	US 1999-296057	A2	19990421		
AB	An emergency alternative <b>fuel</b> for gasoline engines, which is storage stable for .gtoreq.1 yr, comprises .apprx.80 vol.% of mineral (petroleum) spirits and .apprx.20 vol.% of mixed primary C5-alcs ., in which the <b>fuel</b> has a flash point of .gtoreq.100.degree.F. Preferably, the petroleum spirits has an initial b.p. of .apprx.320.degree.F and a dry point of .apprx.415.degree.F; the mixed primary C5-alc. component has an initial b.p. of .apprx.261.degree.F and a dry point of .apprx.282.degree.F. In addn., the emergency fuel has an octane no. of 65-75 and can contain a biocide present at 175-500 ppm concn. The <b>fuel</b> is stored in a container which has an outlet sealed with a removable seal. This container is prevented from being reused for storage after the seal is removed.				
ST	emergency gasoline substitute petroleum spirit; mineral spirit gasoline substitute				
IT	Alcohols, uses				
	RL: NUU (Other use, unclassified); USES (Uses)				
	(C5-primary; emergency alternative fuel for gasoline engines contg. petroleum spirits and mixed primary C5-alcs.)				
IT	Biocides				
	Gasoline substitutes				
	(emergency alternative fuel for gasoline engines contg. petroleum spirits and mixed primary C5-alcs.)				
IT	Petroleum spirits				
	RL: NUU (Other use, unclassified); USES (Uses)				
	(emergency alternative fuel for gasoline engines contg. petroleum spirits and mixed primary C5-alcs.)				
IT	132325-11-2, Fuel saver				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(emergency alternative fuel for gasoline engines contg. petroleum spirits and mixed primary C5-alcs.)				
IT	71-36-3, n-Butanol, uses 71-41-0, n-Amyl alcohol, uses				

108-11-2, Methyl isobutyl carbinol 108-94-1, Cyclohexanone, uses  
123-51-3

RL: NUU (Other use, unclassified); USES (Uses)  
(emergency alternative fuel for gasoline engines contg.  
petroleum spirits and mixed primary C5-alcs.)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Axtell; US 1204638 1916
- (2) Heeren; US 4357146 1982 CAPLUS
- (3) Spencer; US 5681358 1997 CAPLUS
- (4) Sweeney; US 4539014 1985 CAPLUS

L2 ANSWER 60 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1998:527479 CAPLUS

DN 129:163802

TI Disposable fuel burner for alcohols or glycols

IN Burak, Wallace

PA Australia

SO PCT Int. Appl., 61 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM F23D003-18

ICS F23D003-26; F23D003-24; C10L001-04; C10L001-16; C10L001-12

CC 51-12 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9833011	A1	19980730	WO 1998-AU48	19980127
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9857412	A1	19980818	AU 1998-57412	19980127
	AU 736459	B2	20010726		
PRAI	AU 1997-4787	A	19970124		
	AU 1997-8303	A	19970730		
	AU 1997-9161	A	19970912		
	AU 1997-206	A	19971105		
	WO 1998-AU48	W	19980127		
AB	There is provided a disposable fuel burner including a container at least partially filled with a combustible fuel, and having a closed bottom; enclosing side walls; a wick support located above the surface of the fuel and extending between the side walls, at least part of the wick support having a well formed therein and a wick support opening at the bottom of the well, the wick support further having at least one air inlet opening; and an elongated porous wick having an end immersed in the fuel and extending through the wick support opening, the combustible fuel being ignitable at an exposed end of the wick. There is also provided a burner contg. a fuel consisting essentially of an alc. or glycol and from 1 % to 30 % by vol. of water. There is further provided a wick for a burner, the wick consisting of a length of elongated glass fibers surrounded or overlaid at least at one end thereof with a tufted fuel-absorbent material. There is further provided a wind shield for a burner, the wind shield having a hollow body which is open at opposite ends thereof and including at least one air admission hole in a side of the body, at least one air admission hole being				

dimensioned to permit access to a wick of a burner when the wind shield is positioned on the burner, so that the wick may be lit when the wind shield is positioned on the burner.

ST disposable alc glycol burner  
IT Alcohols, uses  
Glycols, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(disposable fuel burner for alcs. or glycals)  
IT Burners  
(disposable; disposable fuel burner for alcs. or glycals)  
IT 57-55-6, Propylene glycol, uses 64-17-5, Ethanol, uses 67-56-1,  
Methanol, uses 67-63-0, Isopropanol, uses 107-21-1, Ethylene glycol,  
uses 111-46-6, Diethylene glycol, uses 25265-71-8, Dipropylene glycol  
RL: TEM (Technical or engineered material use); USES (Uses)  
(disposable fuel burner for alcs. or glycals)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Banyat, K; AU 2754384 A 1984
- (2) Gong, J; CN 1094492 A 1994 CAPLUS
- (3) Magne; FR 522885 A 1921
- (4) Nippon Petrochemica Kk; JP 51127105 A 1976 CAPLUS
- (5) Pyramid Inc; EP 109144 A 1984
- (6) Stewart; US 4887960 A 1989

L2 ANSWER 72 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1997:265449 CAPLUS

DN 126:252182

TI Laminates of olefin polymers and their use as containers

IN Oishi, Tsukasa; Toyozumi, Masahiko

PA Nippon Gohsei Kagaku Kogyo Kabushiki Kaisha, Japan

SO Eur. Pat. Appl., 30 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM B32B027-32

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 759359	A1	19970226	EP 1996-113331	19960820
	EP 759359	B1	20011121		
	R: DE, FR, GB, IT				
	JP 09057913	A2	19970304	JP 1995-236064	19950821
	JP 09109334	A2	19970428	JP 1995-293501	19951016
	JP 09109335	A2	19970428	JP 1995-296171	19951018
	JP 09183189	A2	19970715	JP 1995-353293	19951228
	JP 09183190	A2	19970715	JP 1995-353297	19951228
	US 5849376	A	19981215	US 1996-699465	19960819
	GB 2304309	A1	19970319	GB 1996-17469	19960820
	GB 2304309	B2	19990317		
	FR 2738524	A1	19970314	FR 1996-10331	19960821
	FR 2738524	B1	19981204		
PRAI	JP 1995-236064	A	19950821		
	JP 1995-293501	A	19951016		
	JP 1995-296171	A	19951018		
	JP 1995-353293	A	19951228		
	JP 1995-353297	A	19951228		

AB A laminate having an excellent gas barrier property and an improved org. solvent resistance and is suitable for use in containers for chems. and volatile materials such as org. solvents and fuels, which comprises: (A) a layer comprising (A1) a hydrolyzed ethylene-vinyl

acetate copolymer having an ethylene content of 10 to 70% by mole and a degree of hydrolysis of at least 85% by mole, (B) a layer of a resin compn. comprising (B1) a polyolefin resin and (B2) 0.5 to 40% by wt., based on said polyolefin (B1), of a hydrolyzed ethylene-vinyl acetate copolymer having an ethylene content of 10 to 70% by mole and a degree of hydrolysis of at least 85% by mole, (C) an outer layer of a polyolefin resin disposed on the outer side of said layer (A), and optionally an outer layer of said polyolefin resin (C) disposed on the other side, wherein the ratio of the apparent melt viscosity of said polyolefin (B1) to that of said hydrolyzed copolymer (B2) at a rate of shear of 100 cm<sup>-1</sup> and at 230.degree.C is from 0.1 to 50. The laminate may further contain, in the layer (A) at least one member selected from the group consisting of (A2) a boron compd., (A3) a polyolefin resin, (A4) a terminal controlled-polyamide resin, (A5) a carboxylic acid-modified polyolefin resin, (A6) at least one of salts, oxides and hydroxides of alkali and alk. earth metals, and may further contain, in the layer (B), a graft copolymer prep'd. by graft polymn. of an ethylenically unsatd. carboxylic acid or its deriv. onto a polyolefin followed by a reaction with a polyamide. A typical **bottle** was composed of coextruded walls having 100-.mu.m (A) layer of ethylene-vinyl alc. copolymer (I), 350-.mu.m (B) layer contg. 100 parts high-d. polyethylene (II) and 15 parts I, 300- and 150-.mu.m (C) layers of II on the inside and outside, resp., and 100-.mu.m adhesive layers of Admer NF450A between the (A) and (B) layers and between the (A) and 300-.mu.m (C) layers.

ST olefin polymer laminate **bottle**; polyethylene coextruded multilayer laminate **bottle**; ethylene vinyl alc copolymer multilayer **bottle**; solvent resistant **container** olefin polymer laminate; gas barrier **container** olefin polymer laminate; **container** olefin polymer laminate

IT Polymer blends

RL: DEV (Device component use); USES (Uses)  
(ethylene-vinyl alc. copolymer-polyethylene; multilayer laminates of olefin polymers for **containers** with good gas barrier properties and solvent resistance)

IT Bottles

Containers

Solvent-resistant materials  
(multilayer laminates of olefin polymers for **containers** with good gas barrier properties and solvent resistance)

IT Polyolefins

RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)  
(multilayer laminates of olefin polymers for **containers** with good gas barrier properties and solvent resistance)

IT 9002-88-4, Polyethylene

RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)  
(high-d.; multilayer laminates of olefin polymers for **containers** with good gas barrier properties and solvent resistance)

IT 25067-34-9, Ethylene-vinyl alcohol copolymer

RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses)  
(multilayer laminates of olefin polymers for **containers** with good gas barrier properties and solvent resistance)

L2 ANSWER 75 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1996:649661 CAPLUS

DN 125:278049

TI Method of making hollow plastic products

IN Tinant, Anne; Houba, Roger

PA Solvay et Cie., Belg.

SO Eur. Pat. Appl., 7 pp.

CODEN: EPXXDW

DT Patent

LA French  
 IC ICM C08L023-02  
 ICS C08J007-12  
 CC 38-3 (Plastics Fabrication and Uses)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 732363	A1	19960918	EP 1996-200563	19960301
	EP 732363	B1	19990811		
	R: AT, BE, DE, ES, FR, GB, IT, NL, PT				
	BE 1009189	A3	19961203	BE 1995-225	19950314
	AT 183218	E	19990815	AT 1996-200563	19960301
	CA 2170944	AA	19960915	CA 1996-2170944	19960304
	US 5779954	A	19980714	US 1996-614999	19960313
	PRAI-BE 1995-225		19950314		
AB	Plastic containers, esp. for alc.-contg. gasolines, are molded from, e.g., high-d. polyethylene contg. a polyalkylenimine, esp. polyethylenimine, optionally with subsequent sulfonation of the inner surface. The containers show much lower permeability to fuels than similar containers not contg. the polyamine.				
ST	polyethylene fuel container polyethylenimine				
IT	Sulfonation (in manuf. of hollow plastic products)				
IT	Plastics, molded RL: DEV (Device component use); USES (Uses) (manuf. of hollow plastic products)				
IT	Polyamines RL: MOA (Modifier or additive use); USES (Uses) (manuf. of hollow plastic products from polyethylene contg.)				
IT	Containers (fuel tanks, manuf. of hollow plastic products)				
IT	9002-98-6, Polyethylenimine RL: MOA (Modifier or additive use); USES (Uses) (Lupasol WF; manuf. of hollow plastic products from polyethylene contg.)				
IT	9002-88-4, Polyethylene RL: DEV (Device component use); POF (Polymer in formulation); USES (Uses) (high-d.; manuf. of hollow plastic products)				

L2 ANSWER 77 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 1996:635132 CAPLUS  
 DN 125:278023  
 TI Thermoplastic laminates containing poly(vinylidene fluoride) and having  
resistance to alcohol-containing fuels  
 IN Roeber, Stefan; Ries, Hans  
 PA Huels Aktiengesellschaft, Germany  
 SO Eur. Pat. Appl., 17 pp.  
 CODEN: EPXXDW  
 DT Patent  
 LA German  
 IC ICM B32B027-08  
 ICS B32B001-08; F16L011-04; F16L009-12; C08L077-00  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 37  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 729830	A2	19960904	EP 1996-100448	19960113
	EP 729830	A3	19980422		
	EP 729830	B1	20020925		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	DE 19507026	A1	19960905	DE 1995-19507026	19950301

AT 224813	E	20021015	AT 1996-100448	19960113
CA 2170579	AA	19960902	CA 1996-2170579	19960228
BR 9600857	A	19971230	BR 1996-857	19960229
US 5858492	A	19990112	US 1996-610150	19960229
JP 08252891	A2	19961001	JP 1996-45147	19960301

PRAI DE 1995-19507026 A 19950301

AB The title laminates contain a layer of poly(vinylidene fluoride), a layer of a mixt. of a polyamide (e.g., nylon 12) and a polyglutarimide (e.g., prepd. by reacting poly(Me methacrylate) with MeNH<sub>2</sub>), a layer of a reactive adhesive (e.g., maleic anhydride-modified polyethylene), and a layer of a polyolefin (e.g., high-d. polyethylene) and are esp. useful for pipes and containers for alc.-contg. fuels such isoctane-toluene-MeOH mixts.

ST polyvinylidene fluoride laminate resistance alc gasoline; fluoropolymer laminate resistance alc gasoline; polyglutarimide polyamide laminate resistance alc gasoline; polyolefin laminate resistance alc gasoline; polyethylene laminate resistance alc gasoline; pipe polyvinylidene fluoride resistance alc gasoline; container polyvinylidene fluoride resistance alc gasoline; methanol resistance laminate polyvinylidene fluoride

IT Gasoline  
 RL: MSC (Miscellaneous)  
 (alc.-contg.; laminates contg. poly(vinylidene fluoride) and polyamide-polyglutarimide blends for resistance to)

IT Polyglutarimides  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (blends with polyamides for laminated pipes and containers having resistance to alc.-contg. gasolines)

IT Plastics, laminated  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (contg. polyamide-polyglutarimide blends and poly(vinylidene fluoride) for resistance to alc.-contg. gasolines)

IT Pipes and Tubes  
 (laminates contg. poly(vinylidene fluoride) and polyamide-polyglutarimide blends for resistance to alc.-contg. gasolines)

IT Chemically resistant materials  
 (poly(vinylidene fluoride)-contg. laminates having resistance to alc.-contg. gasolines)

IT Containers  
 (tanks, laminates contg. poly(vinylidene fluoride) and polyamide-polyglutarimide blends for resistance to alc.-contg. gasolines)

IT 9002-88-4, Polyethylene  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (Vestolen A 4042R, Vestolen A 5041R; in laminates for pipes and containers having resistance to alc.-contg. fuels)

IT 108-31-6D, Maleic anhydride, reaction products with polyolefins  
 9002-88-4D, Polyethylene, reaction products with maleic anhydride  
 9010-79-1D, Ethylene-propene copolymer, anhydride derivs. 24937-78-8D,  
 Ethylene-vinyl acetate copolymer, reaction products with maleic anhydride  
 25103-74-6D, Ethylene-methyl acrylate copolymer, anhydride derivs.  
 120918-94-7, Admer L 2100 182441-18-5, Bynel CXA 4001 182441-19-6,  
 Bynel CXA-E 374  
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (adhesives; for fluoropolymer-contg. laminates with resistance to alc.-contg. fuels)

IT 74-89-5D, Methylamine, imidation products with methylamine 110-89-4D,  
Piperidine, derivs., polymers 9011-14-7D, Poly(methyl methacrylate),  
imidation products with methylamine  
RL: PRP (Properties); TEM (Technical or engineered material use); USES  
(Uses)  
(blends with polyamides for laminated pipes and **containers**  
having resistance to alc.-contg. fuels)

IT 24937-16-4, Nylon 12 25038-74-8, Polylaurolactam  
RL: PRP (Properties); TEM (Technical or engineered material use); USES  
(Uses)  
(blends with polyglutarimides for laminated pipes and  
**containers** having resistance to alc.-contg.  
fuels)

IT 24937-79-9, Dyflor EE  
RL: PRP (Properties); TEM (Technical or engineered material use); USES  
(Uses)  
(in laminates for pipes and **containers** having resistance to  
alc.-contg. fuels)

IT 67-56-1, Methanol, miscellaneous  
RL: MSC (Miscellaneous)  
(laminates contg. poly(vinylidene fluoride) and polyamide-  
polyglutarimide blends for resistance to gasolines contg.)

L2 ANSWER 87 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1995:648203 CAPLUS

DN 123:37018

TI Lighting fuel gel.

IN Proctor, David John

PA ITAC Ltd., UK

SO Brit. UK Pat. Appl., 14 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C10L007-02

CC 51-11 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PT GB 2281915	A1	19950322	GB 1993-19454	19930921
PRAI GB 1993-19454		19930921		

AB A lighting fuel, particularly for barbecues, comprises an org.  
flammable liq. (e.g., an alc. and/or a C10-20 paraffin) mixed  
with fumed silica to a gel-like consistency. The fuel can  
contain a hydrocarbon or a resin as a burning/wetting modifier and a spit  
(splattering) inhibitor such as Bu, isoprene, or natural rubber. The  
fuel may be kept in a compressible **container** having a  
nozzle.

ST lighter fuel barbecue paraffin gel; alc paraffin gel  
barbecue lighter; fumed silica paraffin gel barbecue lighter; igniter  
paraffin gel barbecue

IT Fuels  
(gelled; paraffin-alc.-fumed silica-based lighting  
fuel for barbecues)

IT Rosin  
RL: MOA (Modifier or additive use); USES (Uses)  
(igniters contg.; paraffin-alc.-fumed silica-based lighting  
fuel for barbecues)

IT Alcohols, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(igniters contg.; paraffin-alc.-fumed silica-based lighting  
fuel for barbecues)

IT Rubber, butyl, uses  
 Rubber, isoprene, uses  
 Rubber, natural, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (splattering inhibitor, igniters contg.; paraffin-alc.-fumed  
     silica-based lighting fuel for barbecues)  
 IT Alkanes, uses  
 RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
     use); USES (Uses)  
     (C10-20, igniters contg.; paraffin-alc.-fumed silica-based  
     lighting fuel for barbecues)  
 IT Cooking  
     (grilling, barbecueing; paraffin-alc.-fumed silica-based  
     lighting fuel for barbecues)  
 IT Rubber, synthetic  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (isobutylene, splattering inhibitor, igniters contg.; paraffin-  
     alc.-fumed silica-based lighting fuel for barbecues)  
 IT 7631-86-9, Fumed silica, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (colloidal, gelation agent; paraffin-alc.-fumed silica-based  
     lighting fuel for barbecues)  
 IT 9003-31-0 9010-85-9  
 RL: MOA (Modifier or additive use); USES (Uses)  
     (rubber, splattering inhibitor, igniters contg.; paraffin-alc  
     .-fumed silica-based lighting fuel for barbecues)

L2 ANSWER 83 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1996:79105 CAPLUS

DN 124:89799

TI Plastic containers for fuel

IN Hata, Nobuhiro; Ikeda, Kaoru; Sato, Toshiaki

PA Kuraray Co, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B65D001-09

ICS B32B027-28; B32B027-32; C08L023-26; F16L009-12

CC 38-3 (Plastics Fabrication and Uses)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07300123	A2	19951114	JP 1994-92163	19940428
PRAI	JP 1994-92163		19940428		

AB Plastic containers esp. suitable for methanol-contg. gasoline  
 are made from a resin compn. consisting of (1) ethylene-vinyl alc  
 . copolymer and (2) an olefin polymer contg. boric acid, borinic acid, or  
 boric(borinic)-forming functional group and the containers can  
 be either single layer or multi-layer. Low-d. polyethylene was reacted  
 with tri-Me borate in the presence of borane-triethylamine complex, then  
 with methanol and ethylene glycol to provide a low-d. polyethylene contg.  
 ester group derived from boric acid and ethylene glycol. A  
 container was produced from a resin compn. contg. 10 wt.% of  
 sapond. ethylene-vinyl alc. copolymer with ethylene content 27  
 mol% and 90 wt.% of the modified polyethylene obtained above.

ST ethylene vinyl alc polymer fuel container

IT Containers

(fuel tanks, resin compns. for making plastic fuel  
 containers)

IT 9002-88-4DP, Polyethylene, reaction products with boric acid derivs. and  
 ethylene glycol

RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(low-d.; resin compns. for making plastic fuel containers)

IT 107-21-1DP, Ethylene glycol, reaction products with olefin polymers  
121-43-7DP, Trimethyl borate, reaction products with olefin polymers  
9003-07-0DP, Polypropylene, reaction products with boric acid derivs. and ethylene glycol  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(resin compns. for making plastic fuel containers)

IT 25067-34-9D, Ethylene-vinyl alcohol copolymer, saponified.  
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); TEM (Technical or engineered material use); PROC (Process); USES (Uses)  
(resin compns. for making plastic fuel containers)

L2 ANSWER 92 OF 272 CAPLUS COPYRIGHT 2003 ACS  
AN 1994:657274 CAPLUS  
DN 121:257274  
TI The use of FRP with alcohol-containing fuels  
AU Kamody, John F.; Damiani, Annemarie; Stadelman, Richard J.  
CS Reichhold Chem., Inc., Durham, NC, 27703-5543, USA  
SO Journal of Reinforced Plastics and Composites (1994), 13(3), 213-36  
CODEN: JRPCDW; ISSN: 0731-6844  
DT Journal  
LA English  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 51  
AB FRP has had a long history of successful use in containment of gasoline, but introduction of alcohols. coupled with increased levels of reformates makes the fuels more aggressive toward FRP. Designing resins for this purpose is now very demanding, esp. in view of stringent stds. required to prevent leaking from underground tanks and secondary containment vessels. This article discusses the trends in gasoline prodn. as well as recently completed testing for candidate resins. Of special interest is the good performance obsd. for epoxy novolak-based vinyl esters and high-crosslink-d. polyesters.  
ST gasoline alc container reinforced plastic; polyester container gasoline alc; vinyl ester resin fuel container  
IT Glass fibers, uses  
RL: DEV (Device component use); USES (Uses)  
(glass fiber-reinforced plastic containers for alc.-contg. gasoline)  
IT Phenolic resins, uses  
RL: DEV (Device component use); USES (Uses)  
(epoxy, novolak, vinyl esters; glass fiber-reinforced plastic containers for alc.-contg. gasoline)  
IT Containers  
(fuel tanks, glass fiber-reinforced plastic containers for alc.-contg. gasoline)  
IT Epoxy resins, uses  
RL: DEV (Device component use); USES (Uses)  
(phenolic, novolak, vinyl esters; glass fiber-reinforced plastic containers for alc.-contg. gasoline)  
IT Polyesters, uses  
RL: DEV (Device component use); USES (Uses)  
(unsatd., glass fiber-reinforced plastic containers for alc.-contg. gasoline)

IT Epoxy resins, uses  
RL: DEV (Device component use); USES (Uses)  
(vinyl esters, glass fiber-reinforced plastic containers for  
alc.-contg. gasoline)

IT 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 108-88-3, Toluene, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(fuel component; glass fiber-reinforced plastic  
containers for alc.-contg. gasoline)

IT 80-05-7D, epoxy resins, vinyl esters, polymers 158885-72-4, Atlac 490  
158885-73-5, Atlac 570 158885-74-6, Atlac 590 158885-76-8, Dion 9420  
RL: DEV (Device component use); USES (Uses)  
(glass fiber-reinforced plastic containers for alc  
.contg. gasoline)

L2 ANSWER 108 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1992:595034 CAPLUS

DN 117:195034

TI Combustible alcohol-based gels

IN Vicente, Jose Luiz Marques

PA Intersec Comercio Internacional Ltda., Brazil

SO Braz. Pedido PI, 10 pp.

CODEN: BPXXDX

DT Patent

LA Portuguese

IC ICM C10L011-06

ICS C10L011-04; C10L007-04

CC 51-24 (Fossil Fuels, Derivatives, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BR 9002455	A	19911126	BR 1990-2455	19900524
PRAI	BR 1990-2455		19900524		

AB The alc. gel, suitable for use in heating and lighting, is  
prep'd. from an acrylic acid-allylsucrose polymer contg. .apprx.68%  
carboxylic acid groups 0.30-0.45, anhyd. ethanol 60-90, morpholine  
0.30-0.45, and water 25-30 wt.%. The gel is safe and can be used in  
collapsible Al or polyethylene tubes, tin or Al cans, and other  
containers.

ST solid alc fuel compn

IT Cooking

Illumination

(combustible alc.-based gels for use in)

IT Containers

(for combustible alc.-based gels)

IT Wood

Charcoal

RL: USES (Uses)

(starter for firing of, combustible alc.-based gels as)

IT Fuels

(solid, alc.-based gels as, contg. acrylic acid-allylsucrose  
polymer and morpholine)

IT 57-50-1D, ethers, polymers with acrylic acid 79-10-7D, 2-Propenoic acid,  
polymers with allylsucrose 110-91-8, Morpholine, uses 7732-18-5,  
Water, uses 76050-42-5, Carbopol 940

RL: USES (Uses)

(combustible alc.-based gels contg.)

IT 64-17-5, Ethanol, uses

RL: USES (Uses)

(combustible gels based on)

L2 ANSWER 116 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1990:615225 CAPLUS

DN 113:215225  
 TI Method and apparatus for making a torch with **containers** for a mixture of **alcohols**, ketones of metallic, organometallic, or borate salts, with a semisolid or solid combustible and one or more colored flames  
 IN Pinta, Maurice; Witzig, Patrick; Oberthur, Jean Paul  
 PA Fr.  
 SO Fr. Demande, 7 pp.  
 CODEN: FRXXBL  
 DT Patent  
 LA French  
 IC ICM F21L017-00  
 ICS C10L001-10; C10L003-00; C10L005-00  
 CC 51-12 (Fossil Fuels, Derivatives, and Related Products)  
 Section cross-reference(s): 52  
**FAN.CNT 1**  

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2639421	A1	19900525	FR 1988-15089	19881121
PRAI	FR 1988-15089		19881121		

 AB A portable, disposable, easily handled, light, inexpensive torch with a colored flame is made by using a mixt. of alc. and acetone or hydrocarbon fuels with color-forming salts and combustion-improving additives in the fuel cartridge.  
 ST colored flame liq gas fuel  
 IT Flame  
     (colored, fuel cartridges contg. salts for)  
 IT Salts, uses and miscellaneous  
     RL: USES (Uses)  
         (fuel cartridges contg. alc. or ketones or hydrocarbons and, for generation of colored flames)  
 IT Alcohols, uses and miscellaneous  
     Ketones, uses and miscellaneous  
     RL: USES (Uses)  
         (fuel cartridges contg. metal salts and, for generation of colored flames)  
  
 L2 ANSWER 118 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 1990:181890 CAPLUS  
 DN 112:181890  
 TI Preparation of release-controlled alcohol gels  
 IN Yokoyama, Yoshimasa; Hanioka, Mikio  
 PA Nippon Danboru Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C07C031-02  
 ICS A01N025-18; C09K003-00  
 ICA A01N031-02  
 CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)  
 Section cross-reference(s): 5, 51, 63  
**FAN.CNT 1**  

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01305043	A2	19891208	JP 1988-135834	19880602
	JP 2942780	B2	19990830		
PRAI	JP 1988-135834		19880602		

 AB Liq. alc. are gelled and optionally sealed in an air-permeable bag or container to provide release-controlled alc., which are useful in mildew-proofing or ripening-prevention of fruits, in disinfection, and as fuels. Mixing 80% EtOH 100, hydroxypropyl

cellulose 4, and H<sub>3</sub>BO<sub>3</sub> 0.09 part, and gelling with 0.1 part caustic soda produced a gelled EtOH.

ST controlled release alc gel; ethanol gel release controlled; hydroxypropyl cellulose ethanol gel; boric acid ethanol gel; fruit mildew proofing alc gel; disinfection alc gel; fuel alc gel

IT Alcohols, uses and miscellaneous  
RL: USES (Uses)  
(gels, manuf. of, for controlled release)

IT Gelation  
(of alcs., for controlled release)

IT 64-17-5, Ethanol, uses and miscellaneous  
RL: USES (Uses)  
(gels, controlled-release)

IT 77-92-9, Citric acid, uses and miscellaneous 9000-30-0D, Guar gum, propoxylate 9004-64-2, Hydroxypropyl cellulose 10043-35-3, Boric acid, uses and miscellaneous  
RL: USES (Uses)  
(in manuf. of controlled-release alc. gels)

L2 ANSWER 127 OF 272 CAPLUS COPYRIGHT 2003 ACS  
AN 1989:118327 CAPLUS  
DN 110:118327  
TI Solidified alcohol fuel and its preparation  
IN Xue, Zhenyong; Chen, Geng; Qian, Songgao  
PA Hunan Defence Science and Technology Industry Office, Technology Development Centre, Peop. Rep. China  
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 7 pp.  
CODEN: CNXXEV  
DT Patent  
LA Chinese  
IC ICM C10L007-04  
CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	CN 87102065	A	19880120	CN 1987-102065	19870804
	CN 1005271	B	19890927		

PRAI CN 1987-102065 19870804

AB The title fuel contains industrial EtOH 50-90.7, a gelling agent 2-15, a stabilizer 0.3-2.25, a smoke-depressing agent 5-24.75, and tap water 2-8%. The gelling agent is preferably stearic acid and NaOH the stabilizer. The fuel is prep'd. by dissolving the gelling agent in EtOH at 65-70.degree., dissolving the smoke-depressing agent to the soln., mixing the soln. with a soln. of the stabilizer dissolved in tap water, and adding EtOH to the mixt. to a predetd. concn. The obtained fuel m. >45.degree., has pH = 7, and is sealed in containers while it is hot.

ST solidified ethanol fuel sodium hydroxide; stearic acid  
solidified ethanol fuel

IT Fuels  
(ethanol, solidified, gelling agent and stabilizer for)

IT 57-11-4, Stearic acid, uses and miscellaneous

RL: USES (Uses)

(gelling agent, for solidified ethanol fuel)

IT 64-17-5, Ethanol, uses and miscellaneous

RL: USES (Uses)

(solidified fuels from, gelling agent and stabilizer for)

IT 1310-73-2, Sodium hydroxide, uses and miscellaneous

RL: USES (Uses)

(stabilizer, for solidified ethanol fuel)

L2 ANSWER 143 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 1987:141077 CAPLUS  
 DN 106:141077  
 TI Fuel briquets  
 IN Ohashi, Norio  
 PA Japan  
 SO Jpn. Kokai Tokkyo Koho, 2 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C10L007-04  
 CC 51-24 (Fossil Fuels, Derivatives, and Related Products)  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62020594	A2	19870129	JP 1985-159799	19850718
PRAI JP 1985-159799		19850718		

AB A method for manufg. cup-shaped fuel briquets comprises (a) mixing polyolefin resins (e.g., polyethylene) with an inorg. compd. (e.g., CaCO<sub>3</sub>) and extruding the mixt. to form a cup-shaped container, (b) filling the container with a gelled-alc. fuel, and (c) covering and sealing the container with plastic films. The combustion time of the fuel briquets can be significantly increased and the flame contained no soot.

ST fuel briquet manuf gelled alc; soot formation  
 alc fuel briquet

IT Soot  
 (formation of, reduced, from combustion of gelled alc.-contg. fuel briquets)

IT Alcohols, uses and miscellaneous

RL: USES (Uses)  
 (gelled, fuel briquets contg., for soot redn.)

IT Fuel briquets  
 (manuf. of, from gelled alcs., for soot redn.)

IT 471-34-1, Calcium carbonate (CaCO<sub>3</sub>), uses and miscellaneous 9002-88-4,

Polyethylene

RL: USES (Uses)  
 (gelled alc.-based fuel briquets contg., for soot redn.)

L2 ANSWER 146 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1986:629919 CAPLUS

DN 105:229919

TI Apparatus and combustion of lower aliphatic alcohols

IN Shima, Yutaka; Matsuoka, Shoji; Ohira, Tomoaki

PA Japan Carlit Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM F23D003-02

ICA C10L007-04; F23C011-00

CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)  
 Section cross-reference(s): 47

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61173015	A2	19860804	JP 1985-9954	19850124
PRAI JP 1985-9954		19850124		

AB The upper end of a metal heat-transfer medium inserted in a container filled with a lower aliph. alc.-based fuel extends beyond the upper end of the container.

This end of the medium absorbs heat from the combustion of the fuel above the **container** and transfers it directly to the fuel in contact with the lower portion of the medium inside the **container**. Thus, a 1.35-mm-diam. U-shaped Cu wire heat-transfer medium was inserted into an Al **container** (height 3.5, I.D. 8.5, wall thickness 0.75 mm) filled with MeOH. When lit, MeOH burnt steadily for 7 min with a 35-45-mm flame above the **container**

ST methanol combustion app copper wire; heat conductor alc  
combustion app  
IT Burners  
(for combustion of lower aliph. alc.)  
IT 64-17-5, reactions 67-56-1, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(combustion of, app. for)  
IT 7440-50-8, uses and miscellaneous  
RL: USES (Uses)  
(wires, for heat transfer in combustion of lower aliph. alc.)

L2 ANSWER 162 OF 272 CAPLUS COPYRIGHT 2003 ACS

AN 1984:69549 CAPLUS

DN 100:69549

TI Plastic containers for alcohol-hydrocarbon mixtures

PA Showa Denko K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC B65D025-14; C08J007-12

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 51

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58134856	A2	19830811	JP 1982-10884	19820128
	JP 02060577	B4	19901217		

PRAI JP 1982-10884 19820128

AB The title **containers**, useful as **fuel tanks** for automobiles burning gasoline-alc. blends, are treated on their inner and/or outer surfaces with sulfonating agents, neutralizers, and then alk. earth metal salt solns. to reduce their permeability. Thus, blow-molded polyethylene [9002-88-4] **containers** having capacity .apprx.100 cm<sup>3</sup>, inner surface area 650 cm<sup>2</sup>, and av. wall thickness 2 mm were heated to 70.degree., purged with N, treated with 13 vol% SO<sub>3</sub>, purged, neutralized with NH<sub>3</sub> gas, washed with water, heated to 80.degree., treated with 3% aq. MgCl<sub>2</sub> for 5 min., washed, and dried. When the resulting **containers** were filled with 500 cm<sup>3</sup> of a 90:10 mixt. of gasoline and EtOH [64-17-5], sealed, and stored at 40.degree., the loss of contents was 0.08 g/day, compared with 1.46 g/day for untreated **containers**, and 0.18 g/day for **containers** which had been sulfonated and neutralized, but not treated with the MgCl<sub>2</sub> soln.

ST alc hydrocarbon mixt plastic **container**; sulfonation neutralization electrolyte treatment polymer; alk earth salt treatment polymer; gasoline alc fuel tank permeability; gasohol fuel tank permeability redn

IT Gasoline

RL: USES (Uses)  
(alc. blends, plastic **containers** for, alk.-earth electrolyte treatment for reducing permeability of)

IT Permeability and Permeation  
(of plastic **containers** to gasoline-alc. blends,  
alk.-earth electrolyte treatment for redn. of)

IT Alkaline earth compounds  
 RL: USES (Uses)  
 (salts, treatment of plastic containers with, for reduced permeability to gasoline-alc. mixts.)  
 IT Automobiles  
 (fuel tanks, plastic, alk.-earth electrolyte treatment of, for reduced permeability to gasoline-alc. blends)  
 IT Containers  
 (tanks, plastic, for gasoline-alc. mixts., alk.-earth electrolyte treatment of, for reduced permeability)  
 IT 9002-88-4  
 RL: USES (Uses)  
 (containers, for alc.-hydrocarbon mixts., sulfonation, neutralization and alk.-earth electrolyte treatment of, for reduced permeability)  
 IT 64-17-5, reactions 67-56-1, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (gasoline blends, plastic containers for, sulfonation, neutralization and alk.-earth electrolyte treatment of, for reduced permeability)  
 IT 7446-11-9, uses and miscellaneous  
 RL: USES (Uses)  
 (plastic containers treated with, for reduced permeability to hydrocarbon-alc. mixt.)  
 IT 62-54-4 142-72-3 543-80-6 7786-30-3, uses and miscellaneous  
 10043-52-4, uses and miscellaneous 10361-37-2, uses and miscellaneous  
 17194-00-2  
 RL: USES (Uses)  
 (treatment of sulfonated and neutralized plastic containers with, for reduced permeability to gasoline-alc. mixts.)  
 IT 7664-41-7, uses and miscellaneous  
 RL: USES (Uses)  
 (treatment of sulfonated plastic containers with, for reduced permeability to alc.-hydrocarbon mixt.)

L2 ANSWER 183 OF 272 CAPLUS COPYRIGHT 2003 ACS  
 AN 1978:549465 CAPLUS  
 DN 89:149465  
 TI Liquid fuel composition  
 IN Lee, Soo B.  
 PA Lee, Ki Hyun, USA  
 SO U.S., 4 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 IC C10L001-16  
 NCL 044051000  
 CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4088454 CA 1073675	A A1	19780509 19800318	US 1976-735675 CA 1977-270563	19761026 19770127
PRAI	US 1976-654015 US 1976-735675		19760130 19761026		

AB A fuel is prep'd. by adding to an oxidn. resistant tank 60-80 vol. % of an aq. KOH, NaOH, or NaHCO<sub>3</sub> and a lower alkyl alc. and by transferring a prefuel compn. from a sep. container to the tank. The prefuel compn. is prep'd. from 10-50 precursor fuel, 20-70 oil, and 10-50% H<sub>2</sub>O; the precursor fuel being prep'd. from C, H<sub>2</sub>O, and oil with d. <1.

ST fuel liq

IT    Fuels  
      (liq., alkali-alc.-coal-oil)

L2    ANSWER 239 OF 272    CAPLUS    COPYRIGHT 2003 ACS

AN    1956:14291    CAPLUS

DN    50:14291

OREF 50:2956e-f

TI    Solidified-alcohol fuels

IN    Schultze, John E.

PA    National Distillers Products Corp.

DT    Patent

LA    Unavailable

CC    21 (Fuels and Carbonization Products)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI    US 2721120            19551018            US

AB    Solns. of nitrocellulose in EtOH or MeOH or their mixts. are solidified or gelatinized by addn. of a miscible nonsolvent, usually water. Other solvents may be added in smaller proportions to facilitate soln. of nitrocellulose. Difficulties which have been experienced in obtaining a uniform gel structure are minimized by rotation of the **container** about its vertical axis while introducing the water through a spray head. Details of the app. are given.

L2    ANSWER 240 OF 272    CAPLUS    COPYRIGHT 2003 ACS

AN    1956:2783    CAPLUS

DN    50:2783

OREF 50:550a-c

TI    Oil-, fuel- and solvent-resistant materials

PA    Rudolf Decker and Hellmuth Holz; Hans Scheidemandel

DT    Patent

LA    Unavailable

NCL 80B; 1-17

CC    20 (Cement, Concrete, and Other Building Materials)

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI    DE 827307            19520110            DE

AB    Mineral binders (cement, concrete, gypsum, Sorel cement, etc.) setting with water are mixed with polyvinyl alc. (I) or its water-sol. derivs., preferably those having a sapon. no. of 80-120. The mixts. are worked up in the usual manner. The binder can be slaked with water contg. I; or a mixt. of binder, sand, and powd. I can be slaked with water. The setting process is not affected by the presence of I; however, the mech. properties are considerably improved. The products are suitable for manuf. of **containers** and tanks for oils, fuels, or solvents, and of floor coverings for garages, etc. .